Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
Numbering Resource Optimization	)	CC Docket No. 99-200
	)	
FCC Seeks Comment on the Thousands-Block	)	
Pooling Administrator Technical Requirements	)	
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To: The Commission

COMMENTS OF SYNIVERSE TECHNOLOGIES

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SUMMARY

Syniverse's comments present the perspective of a company that has been providing carrier solutions for number pooling and number portability for many years, and expects to pursue the Pooling Administrator (PA) opportunity when it is presented in the coming year. The Commission staff and the NANC have done an excellent job in preparing the draft Technical Requirements Document (TRD). With relatively minor changes, the Commission can use these requirements to formulate a request for proposals (RFP) that maximizes value for the Commission, the states, and the industry.

First, technology has advanced significantly since the last PA RFP was issued five years ago. Certain requirements should be updated to reflect state-of-the-art technology and procedures, such as the use of a workflow engine for the number block assignment process, the replacement of fax-based applications with a web-based Graphical User Interface (GUI), and improved, more secure communications between the PA and the NANPA.

The RFP also should clearly specify the existing PA's transition responsibilities, so that non-incumbent competitors can clearly ascertain the scope of transition work and formulate the best possible offers. The RFP also should avoid unnecessary cross-references to the NANPA, since in future the NANPA and the PA may not be the same entity. The offer process also will be improved if "Section H" of the RFP is released for comment before the RFP is finalized.

These comments also present various suggestions with respect to specific sections of the TRD.

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Syniverse Technologies (Syniverse), hereby responds to the Commission's Public Notice

requesting comments on the North American Numbering Council's (NANC) proposed technical

requirements for the national thousands-block Pooling Administrator (PA).[1] As a party qualified

to act as, and interested in becoming, the PA at the end of the current administrator's contract

term, Syniverse provides a unique perspective on what should be included in the final TRD that

will form the basis of the Request For Proposals (RFP) anticipated as a precursor to awarding the

PA contract for the next five year term.

In formulating these comments, Syniverse brings to bear substantial experience in

number pooling and the underlying number portability technology and operations. Syniverse is a

global communications technology company specializing in innovative business and network

engineering solutions that manage and interconnect voice and data systems in 44 countries

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[1] *FCC Seeks Comment on the Thousands-Block Pooling Administrator Technical Requirements,*
CC Docket No. 99-200, Public Notice, DA 05-3102 (rel. Nov. 29, 2005, erratum Dec. 2, 2005)
(the "Public Notice"). The Public Notice attached the NANC's proposed technical requirements
document (the "TRD").

throughout North America, Central and Latin America, Asia Pacific and Europe, Middle East and Africa. Syniverse provides number portability, technology interoperability, network services and call processing to more than 330 customers worldwide representing mobile operators, wireline carriers and emerging telecom market entrants. In addition to number portability solutions, our products include C7/SS7 intelligent network signaling solutions, clearing and settlement services, voice and data roaming facilitation, fraud management, revenue enhancement solutions and more than 25 other integrated services. Syniverse is public company whose stock is traded on the New York Stock Exchange (NYSE: SVR).[2]

Syniverse (previously known as TSI) was an integral part of the successful implementation of wireless-wireless and intermodal local number portability (LNP) on November 24, 2003. Syniverse provides an end-to-end number portability solution including application development, application hosting, disaster recovery and professional services. These LNP solutions enable intercarrier exchange of porting information and communications between wireline and wireless carriers and the Number Portability Administration Center (NPAC) to support wireline-to-wireline, wireless-to-wireless, and intermodal porting. Syniverse is an active participant in number portability working groups and standards bodies including the North American Numbering Council (NANC) Local Number Portability Administration Working Group (LNPA WG) and the ATIS Ordering and Billing Forum (OBF).

I.   GENERAL COMMENTS ON TRD

As the Public Notice confirms, the current draft TRD is based in large measure on the technical requirements for the existing contract executed in 2001, the first time that a PA contract

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[2] More information about Syniverse can be found at *www.syniverse.com*.

had been awarded.[3] However, over the last five years technology has improved dramatically, and a number of the requirements set forth in the TRD are no longer "state of the art" and actually make the PA inefficient. Thus, there are a number of technological capabilities which the PA should be capable of today that could not reasonably have been anticipated five years ago when the initial technical requirements were being developed. The lack of such capabilities clearly limits the Commission's flexibility in improving number pooling and, ultimately, the most favorable number conservation policies. Requiring such capabilities in the next RFP will allow the PA to be fully efficient during the next five year term.

For example, in **Section 2.16** dealing with block assignment procedures, the Commission should update existing processes in light of current technology; in order to facilitate more efficient, rapid, and error-free processing, the PA should process block assignments and related reports in an automated fashion supported by a workflow engine.[4] A workflow engine, based on well-defined business rules, guides work in an efficient and effective manner. Properly configured, a workflow engine enables a focus on reducing errors and delays in handoffs from one party to another, leading to a more efficient number assignment process. In addition, the PA should be required to support fax-to-text engines for increased efficiency and effectiveness, and the FCC should prescribe a timeline for the phase-out of faxed submissions. Given that web-based interfaces are accessible today to even the smallest enterprises (indeed, even individuals

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[3] Public Notice at 1-2.

[4] A workflow engine is software that guides a piece of work through a pre-defined process across functions, departments, etc. A workflow engine will reduce a complicated process (such as number pooling) to a number of relatively simple sub-tasks and guide relevant parties through these tasks until the overall process is complete. It reduces errors and improves efficiency, thereby reducing costs

today use web-based interfaces for such functions as banking transactions and ordering merchandise from retailers), there is no longer a realistic need to support faxed requests.

Similarly, in **Section 2.20.3,** the Commission should consider updating the required interface with the NPAC vendor. The TRD specifies an email interface, but opportunity for error could be reduced through the use of a mutually agreed-upon Extensible Markup Language (XML)-based Application Programming Interface (API) between the PA and NPAC systems. Using such an interface would also lead to efficiency gains for both the PA and the NPAC and help resolve conflicts that might arise if an e-mail was not received or confirmed according to the current manual processes. With a properly configured, direct, system-to-system interface, security can be enhanced relative to e-mail so that proprietary information is more controlled. Syniverse also recommends that PA be required to specify and support an optional interface with carriers' Operational Support System (OSS) number inventory management systems to provide enhanced interoperability and utility. Syniverse today supports several interface protocols to and from carriers' OSS via email, fax, CORBA, XML, AS2, EDI and web-based HTML forms for supporting and completing porting transactions.[5] Providing interface options to those carriers who want to take advantage of the benefits of an automated and secured OSS interfaces with the PA system would improve cost-efficiency, reduce response times, and minimize errors.

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[5] Today, Syniverse supports porting activity for all Tier 1 and some Tier 2 wireless carriers using an automated interface into their OSS based on CORBA or XML protocols. Other Tier 2 and all Tier 3 carriers chose to utilize the Syniverse web GUI delivered through Syniverse's secure Crossroads Internet portal service. While the web GUI requires "swivel-chair" manual re-entry of porting data, it has proven to be more then adequate for smaller carriers with small porting volumes, and does not require the support, testing, or maintenance required for an automated interface.

The RFP also needs to be clearer and create a neutral playing field in its consideration of transitional matters that, in the initial technical requirements involved mandates for the PA to create new systems that did not exist prior to the commencement of national pooling. The proposed TRD appropriately suggests that all hardware and software systems used by the current PA will transition to the new PA, thus recognizing that a new PA will not have to "reinvent the wheel", so to speak, in taking over the PA responsibilities.[6] However, because so much of the proposed TRD copies the initial technical requirements, it is sometimes difficult to tell if the proposed TRD simply reflect specifications for systems that were necessary in the original contract but have not yet been scrubbed out of the new TRD, or if, instead the current PA will not be required to transition existing systems and interfaces will be transitioned to any new PA, as suggested in the provisions of section 3.20.

An example of this problem appears in Section 3.1.5, the mechanized interface with the NANPA. Such an interface evidently exists between the existing PA contractor and the NANPA, and one can assume from section 3.20 that it is supposed to be transitioned. However, in order to formulate accurate proposals, non-incumbent competitors for the PA contract will need certainty as to whether features and systems such as these **must** be transitioned by the existing contractor to a new selectee and how the transfer will be accomplished. For example, the current contractor's transition plan might assume that:

a) any new contractor will have created and tested a parallel pooling system prior to a cut over to the new contractor; or

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[6] *See* TRD § 3.20. (This assumes the current PA contract contains the same transition requirements.)

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b) the current contractor's back-up pooling system will be moved to the new contractor's facilities, be tested, and then become the primary system upon cut-over.

While both of these alternative methodologies have their own pros and cons and *could* be reasonable approaches, the cost implications for the new contractor are very different. Consequently, some information on the transition plan should be incorporated into the RFP so a more accurate estimate can be provided.

Similarly, section 3.12.1 of the proposed TRD regarding system testing seems to contemplate *initial* system testing rather than *transition* testing; it is also not entirely clear that the outgoing vendor will be obligated to cooperate in such transition testing. To avoid the significant disadvantage that the new contractor would suffer if it must perform transition system testing without the outgoing vendor, the requirements should specify the extent to which the new contractor will be able to rely on reasonable cooperation where necessary from the current vendor. Indeed, the Commission must update the specifications as necessary to reflect those features and systems that no longer need to be created by the contractor but instead will transition from the existing contractor, as well as those activities that will require the participation of the current vendor and for which the current PA is contractually obligated to assist.

As presently formulated, the TRD contains a number of cross-references to the existence of a commonality between the PA and the NANPA, although there is neither a requirement for such commonality or an assumption that after the award of the next PA contract, such commonality will exist. As an example, section 1.4 of the TRD notes that the PA shall be subject to the same neutrality requirements as the NANPA; to retain total fairness for the process, the PA technical requirements should only refer to the section relevant to the PA (section 52.20, which contains the appropriate cross-reference to the neutrality rule), rather than

making a gratuitous cross-reference to the NANPA requirement. Similarly, section 1.7 indicates that the PA, "like the NANPA," shall maintain appropriate relationships with governmental and regulatory bodies. This gratuitous reference to the NANPA should similarly be removed; instead, and to ensure the greatest value for the government, the Commission should strive to minimize unnecessary suggestions of any corporate relationship between the PA and the NANPA.

Finally, the TRD also contains numerous cross-references to "Section H," a document that is not included with the Public Notice or the TRD.[7] In order to permit the most useful input from potential offerors, industry participants, and other interested parties, the Commission should release Section H for public inspection and, potentially, comment before the RFP is finalized.

II.   COMMENTS ON SPECIFIC SECTIONS OF THE TRD

In this section, Syniverse presents comments on specific sections of the TRD.

Section 1.6.2. The import of the term "user friendly" is generally understood but open to a wide range of subjective interpretations. While Syniverse presumes that all potential offerors would strive to develop a user-friendly system, in order to maximize industry satisfaction, the Commission should work with the NANC and other industry participants to specify, to the extent possible, the mandatory and objectively measurable features and attributes that would make a pooling administration system user friendly. For example, providing a list of possible valid values, such as valid NXXs in a given NPA, in a web-based form is indeed user friendly, but

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[7] The cover page of the TRD is labeled "Section J." It is Syniverse's understanding that, in the former procurement for the PA, Section H of the RFP was entitled Special Contract Requirements and included standard Federal Acquisition Regulation (FAR) terms as well as other requirements.

might not be considered a mandatory feature by NANC and other industry participants. Specifying such a list of system requirements will enable potential offerors to more accurately predict system development and maintenance costs and therefore provide a more accurate offer.

Section 2.3.7. This section indicates that the PA's employees may not "represent the interests" of the PA's parent company, and that divisions, departments, or employees of the PA's parent company may not "represent the interests" of the PA. This provision could be construed to require that there may be no sharing of employee resources between the PA and its parent company or affiliated entities. The PA must unquestionably be neutral and unencumbered by conflicts of interest. It is not clear, however, that total separation of all employees is necessary to achieve this goal. Conversely, it *is* clear that a requirement of total separation of staffing between the PA and its parent and affiliated entities will result in uneconomic staffing and prevent the Commission from obtaining the greatest value for the industry. For example, to achieve total separation, the contractor would be forced in some cases to choose between providing dedicated staff for functions that do not justify a position a full-time position or cross-training staff for unrelated functions that may not employ complementary knowledge or skills. Neither outcome will result in the best value for the Commission or the industry. One example of this might be the role of public affairs spokesperson. While it is important for the PA to communicate information to the industry and general public via press releases, web sites and other similar methods, the management of this communications process may not require a full-time position staffed by a person with the skills and experience necessary to manage the process. Other marginally related positions, such as web site designer, utilize different skill sets entirely. Instead of cross-training employees on positions with unrelated skill sets, an organization may be able to utilize experts already in place in or across other business units to manage the process of communicating with the industry and general public as needed.

As a result, the RFP should specify reasonable restrictions on shared use of resources to ensure neutrality and lack of conflicts. We further urge the FCC to adopt a policy that all contractor employees working on PA functions should be bound by the PA neutrality and confidentiality requirements, whether they work for a separate entity of the contractor's organization dedicated to PA or work for the parent company in a different business unit. . There is no evidence, however, that a total ban on sharing of staff resources is necessary to achieve the Commission's goals in this area.

Section 2.9. There unquestionably is a role for the PA in the resolution of disputes, both between and among service providers and, potentially, between service providers and the PA. This provision specifies that the PA's role shall consist of "providing guidance and/or historical data." In the same vein, section 2.9.3 specifies that the "extent to which the contractor is involved in the resolution of disputes shall depend on the nature and origin of the dispute." Syniverse suggests that, in formulating the RFP, the Commission provide somewhat greater detail and guidance regarding the types of disputes in which the PA is expected to participate (the primary examples are disputes between service providers and disputes between a service provider and the PA), and the role of the PA in each type of dispute.

Section 2.9.1. This section indicates that the "contractor shall be responsible for expenses that are incurred in achieving compliance with any law, regulation, audit, or contract requirement." It appears that this provision is intended to reflect an intention that, if a dispute between a service provider and the PA reveals an instance of noncompliance *by the PA,* the PA must, at its own expense, bring itself into compliance with the existing rules. Syniverse believes this requirement is entirely appropriate, but suggests that the RFP should reflect the necessary limitation that the contractor is required to fund the costs of compliance with regulatory

requirement existing at the time of award of the contract; compliance with later regulatory changes should be handled through a change order process.

Section 2.9.4. It would be helpful to make explicit the connection between the "disputes" referenced in all the subsections of section 2.9 and a "performance problem" as referenced in subsection 2.9.4. It appears that a performance problem would be identified if a service provider disputed the PA's performance under the contract or interpretation of applicable rules or guidelines, and the Commission concluded that the service provider's claims had merit. As currently formulated, however, the provisions could be susceptible to other interpretations. To ensure the accuracy in the formulation of offers and performance, the RFP should more precisely define the terms "dispute" and "performance problem," the relationship between these terms, and the PA's responsibilities with respect to each.

Section 2.10.7. This section includes a reference to "Section 1" regarding audits and records provisions. Section 1 of the TRD contains no apparent provisions regarding audits and records. The RFP should clearly specify the PA's responsibilities with regard to audits and records.

Section 2.13. This section lists the NPAC regions and the states assigned to each. Syniverse notes that neither Alaska nor Puerto Rico appears on the list, although both jurisdictions contain pooling NPAs.

Section 2.21. In addition to the "standard reports" specified in the TRD, the PA should be required to provide a state-of-the-art, powerful, and easy-to-use web-based custom report generation tool for the Commission and, as appropriate, state regulators. This would increase regulators' ability to determine pool inventory and identify measures to improve number utilization. An example of these reports might include a map-based report of number inventory

showing geographic regions with number pools with greatest or most immediate demand highlighted in a different color (e.g., red) to distinguish them from other geographic regions.

Section 2.21.3. As indicated by the comment regarding the prior subsection, Syniverse supports requiring the PA to provide useful reporting as needed. This subsection's reference to "external distribution" should be defined with greater specificity, to aid offerors in formulating their response. For example, would "externally distributed" reports go only to regulators, or also to service providers, the media, the general public, or some other group? Knowing the intent of "external distribution" will allow a potential offeror to properly scale necessary hardware, network and license requirements so a more accurate offer can be submitted.

Section 3.2. As noted above, Syniverse supports requiring the PA to provide state-of-the-art web-based interfaces and reporting functionalities. It would be helpful for offerors, however, if the terms "electronic commerce" and "efficient user interaction" in this subsection were defined with greater precision. This will facilitate the development of more responsive offers.

Section 3.12. As currently formulated, the requirement that the PA "participate in *any* pooling test deemed appropriate by the FCC" to ensure efficiency and interface with other standards is open-ended and will not lead to the formulation of the most economical offers. To implement this requirement, the Commission's RFP should request a specific hourly rate for testing. While prospective offerors can formulate an hourly rate for testing activities, it is not feasible to formulate an offer for an open-ended number of hours of testing

Section 3.15. Syniverse concurs that the system should support access using a logon ID and password. In fact, the PA should support a system that allows one or more properly authorized user at each accessing organization to provide "administrator" type functions, such as issuing additional user IDs and passwords to other users within that organization as permitted by

that organization. This will allow the PA to provide a greater degree of responsiveness to its users while simultaneously reducing support costs resulting in a greater value.

Section 3.19. Syniverse supports a requirement that the contractor provide system documentation, and believes that the requirement also should specify that any system changes should be documented prior to implementation. Under the existing specification, the current contractor would not have to re-publish documentation while the successor apparently would be required to do so during the transition.

CONCLUSION

Thousands-block pooling administration is an important function to the Commission, the states, and the telecommunications industry. The Commission staff and the NANC have done an excellent job in preparing the proposed technical requirements. With the relatively minor changes discussed herein, the Commission will be able to formulate an RFP that maximizes value and performance for all involved parties.

Respectfully submitted,

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